SUPPLEMENT TO "NATURE."

COAL IN INDIA.

The Coalfields of India. By the late Prof. V. Ball, F.R.S. Entirely revised and largely re-written by R. R. Simpson. Pp. 147+xliv. (Calcutta: Published by order of the Government of India, 1913.)

THIS work constitutes volume xli. of the memoirs of the Geological Survey of India, and its publication will rank high on the already long list of works upon the economic mineralogy of India, for which we are indebted to the Indian Geological Survey. Unlike many others, the authorities responsible for the geological survey of the Peninsula have realised the full importance of the economic side of their work, and have devoted much attention to it, to the manifest advantage of the Indian mineral industry. The present work is the more opportune because in spite of the rapidly increasing importance of the coal production of India, no connected account of the Indian coalfields, as they now exist, was anywhere available, and information concerning individual coalfields or collieries had to be collected from a very miscellaneous series of publications; how widely scattered this information is may be gathered from the bibliography appended to the present treatise, which covers no fewer than twenty pages of the book.

The only work dealing with the Indian coalfields as a whole is that upon which the present one is based, though in reality little more than the framework of the original is to be found in the present book; the original work was the volume on economic geology, written by the late V. Ball, forming volume iii. of the "Manual of the Geology of India," published so far back as 1881. Not only has this book long been out of date, but it has also been out of print for many years. How completely it is necessarily out of date is evident from the fact that in the year when it was published the total coal production of India was under one million tons, practically the whole of which came from Bengal, with the exception of a small output from the Central Provinces; in 1910 the total production was more than twelve millions of tons, and although Bengal is still responsible for some 90 per cent. of the total, no fewer than seven other States and provinces contribute to it.

The opportunities for obtaining additional information regarding the coalfields of India had thus increased enormously in the interval, whilst a still greater increase had taken place in the number of investigators capable of taking advantage of these facilities; for many years the officers of the Geological Survey merely devoted to the coalfields such portions of their time as could be spared from other more strictly geological work, and, of course, they were necessarily geologists and not mining engineers; with the increasing importance of coal mining, it was found necessary to devote special attention to this branch, and the survey authorities appointed a mining specialist. This was the appointment held by Mr. R. R. Simpson, and in the course of his duties he travelled widely over the Indian coalfields, and thus accumulated the information of which he has made such excellent use in the present volume. It need only be said that he has given a clear and concise description of the various Indian coalfields, which, without being over-laden with detail, nevertheless summarises very completely all the information that is likely to be of use to the general student of the subject, whilst his very complete bibliography will enable any inquirer interested in any special field to supplement the information here given with all known details.

The brief sketch of the geology of the Indian coalfields, that serves as an introduction to the more detailed descriptions, may be selected as worthy of special commendation. On the other hand, a little more information concerning the labour conditions would have been welcome, and the very important question of colliery accidents has not even been referred to. It is quite true that the object of the book is in the main to supply geological information respecting the coalfields, but it would have been as well to supplement this with a sufficient amount of economic information to enable the reader to form a clear picture of Indian coal-mining conditions. Mr. Simpson has given a good deal of such information in a short but useful chapter upon the output, conditions of railway transport, selling price, markets, &c., but his reference to labour occupies only one short paragraph. It must not be supposed that this constitutes a serious blemish upon a volume that in all other respects is a highly satisfactory and very welcome piece of work, for which everyone interested in coal-mining will be grateful to the survey authorities no less than to the author himself.

H. L.

THE PHYSICAL TRAITS OF SCHOOL CHILDREN.

Pedagogical Anthropology. By Maria Montessori. Translated from the Italian by F. C. Cooper. Pp. xi+508. (London: William Heinemann, 1913.) Price 14*s.* net.

A VERY general remark which followed the appearance of "the Montessori Method" was that that work provoked thought, and led teachers in infant schools and kindergartens to

© 1914 Nature Publishing Group

reconsider both their methods and the principles underlying them. In that work Dr. Montessori made reference to the importance of accurate physical records, and gave testimony to the influence these had had in leading up to the system in use in the children's houses. The translation of her lectures on anthropology as applied to education has therefore been awaited with great interest, and the result is a book which must lead all responsible for the physical welfare of the school-child to take stock of their data and their conclusions.

This volume, comprising the lectures given by the author to students of education and medicine in the University of Rome, should prove of interest to the lecturers on school hygiene at training colleges, who might with advantage incorporate into their syllabus some of the methods suggested. The volume should also be read by the school medical officers as containing many items relative to the diagnosis, and to some extent the prognosis of abnormal children. A biographic and biometric record should be kept of every child, since the study of the individual should indicate the particular form of education required.

The respective parts which Dr. Montessori considers should be played in the application of pedagogical anthropology are perhaps revealed by the direction that a *bad* child should be taken to see a *physician* because it is almost certain that he is a sick child in whom anomalies of character may coincide with morphological variations. But the treatment of such maladies is very often mainly pedagogical; curative pedagogy, however, must absolutely abolish punishment. By the general use of the biographic charts the observer is able to see in every social class "those individual variations in physical and physiological condition which contribute to the development of the intelligence and to the manifestations of sentiments which play an active part in practical life."

In the children's houses the teachers and doctors are able to study every aspect of the families, economic, social, medical, and moral, and so can collect the data which will be needed for any rational efforts at reform. It is as idle to expect to cure the body politic until the roots of the social evils have been probed to the utmost as it would be to expect to cure a patient by a random selection of nostrums without first employing the ordinary methods of diagnosis. The author regards the introduction of biographic charts in schools as nothing less than a reform of science as a whole, upon which pedagogy, medicine, jurisprudence, and sociology may alike lay new foundations. These are stirring suggestions, which ought to bear fruit in this country, if anywhere, since by now every elementary-school child has its medical and pedagogical progress recorded, and the vast stress of information concerning family circumstances of an economic and social character collected by the untiring efforts of the teachers and of the working members of care committees could be correlated therewith. Such work should be general, and not confined to one or two areas and laboratories, and would be a worthy task for our larger education authorities or a department of State.

The value of the particular physical and mental measurements recommended by Dr. Montessori and the precise method of investigation to pursue may be matters of dispute; many of the data and standards cited in the text will be regarded by the anthropologist as invalid when applied as tests elsewhere than in Italy, but none can dispute the stimulus to be derived from a perusal of this book, and still more of an effort to apply the general reasoning employed to the needs of particular children or groups of children, with due corrections for their urban or rural environment, the comfort or poverty of their homes, and the racial and social status of their ancestry. The result might help to hasten the dawn of that biological liberty which the author postulates as the very essence of the newest pedagogy, which will prepare each pupil for that form of employment which is best suited to his individual temperament and tendencies.

THE PHENOMENON OF ANAPHYLAXIS.

Anaphylaxis. By Prof. Charles Richet. Authorised translation by J. Murray Bligh. Pp. xii+266. (Liverpool: The University Press; London: Constable and Co., Ltd., 1913.) Price 3*s*. 6*d*. net.

THIS translation of Prof. Richet's excellent little manual on anaphylaxis will be very welcome to English readers. In 1902 Richet and Portier found that previous injection produced increased sensitivity to the poison extracted from the tentacles of actinaria. This being the opposite to the immunity following successive injections of most toxins, which has been so much studied of recent years, Richet gave the name "Anaphylaxie" to the phenomenon.

Indications of the existence of hypersensitivity to a second injection of protein substances had been previously recorded by Majendie, Theobald Smith, Behring, and others. The occurrence of the phenomenon was, however, inconstant, and remained unexplained. Exact knowledge of it dates from Richet and Portier's experiments. They found that, with the poison they were working with, the phenomenon was constant, provided a definite interval were allowed to intervene be-

© 1914 Nature Publishing Group